

Please amend claim 1 as follows.

1. (amended) In a [Wye-connected] multiple phase electrical system for supplying  
2 power from an AC source to [at least one] a plurality of nonlinear [load] loads connected  
3 to [a] at least one phase line therein, a device for substantially eliminating currents in the  
4 neutral wire [generated by the nonlinear load], said device comprising:  
5 [an] a first electrical circuit comprising  
6       a first passive electrical component connected along a phase line in said  
7 electrical system in series [between the AC source and the] with at least one  
8 of said nonlinear [load] loads,  
9       a second passive electrical component connected in parallel to said first  
10 passive electrical component,  
11       a third passive electrical component connected in parallel to said first  
12 and said second passive electrical components; and  
13       wherein said first, said second, and said third passive electrical components of said  
14 first circuit are tuned to a harmonic frequency of a fundamental frequency of the AC source  
15 so as to substantially eliminate a harmonic current drawn by [the] said at least one nonlinear  
16 load connected in series with said parallel connection of said first, said second, and said third  
17 passive electrical components.

[Please amend claim 2 as follows.]

1       2. (amended) A device as recited in claim 1, wherein:  
2       said first, said second, and said third passive electrical components of said first  
3 electrical circuit are tuned to a third harmonic frequency of the AC source.

*[Please amend claim 3 as follows.]*

3. (amended) A device as recited in claim 1, wherein:

4 said first passive electrical component of said first electrical circuit comprises a  
capacitor;

5 said second passive electrical component of said first electrical circuit comprises a  
6 reactor; and

7 said third passive electrical component of said first electrical circuit comprises a  
8 resistor.

*[Please amend claim 4 as follows.]*

1 4. (amended) A device as recited in claim 2, wherein:

2 said first passive electrical component of said first electrical circuit comprises a  
3 capacitor;

4 said second passive electrical component of said first electrical circuit comprises a  
5 reactor; and

6 said third passive electrical component of said first electrical circuit comprises a  
7 resistor.

(Please amend claim 5 as follows.)

5. (amended) A [harmonic] neutral current eliminating device as recited in claim 1,  
wherein:

each phase line in the electrical system [is connected] supplies power to at least one  
nonlinear load;

said device [comprises a plurality of said] includes a second and third electrical  
[circuits] circuit, each of said first, said second and said third electrical circuits being  
connected along a separate phase line [therein] in said electrical system [and] in series with  
at least one nonlinear load whose power is supplied by said separate phase line, [so as to]  
said first, said second and said third electrical circuits substantially eliminate a harmonic  
current in each of said separate phase lines drawn [thereby] by said nonlinear loads;

said second electrical circuit comprises a fourth passive electrical component, a fifth  
passive electrical component connected in parallel to said fourth passive electrical  
component, and a sixth passive electrical component connected in parallel to said fourth and  
said fifth passive electrical components;

said third electrical circuit comprises a seventh passive electrical component, an  
eighth passive electrical component connected in parallel to said seventh passive electrical  
component, and a ninth passive electrical component connected in parallel to said eighth and  
said seventh passive electrical components; and

wherein each of said first, said second and said third electrical circuits is tuned to an  
identical harmonic frequency of the AC source.

Please amend claim 6 as follows.]

1 6. (amended) A [harmonic] neutral current eliminating device as recited in claim 2,  
2 wherein:

3 each phase line in the electrical system [is connected] supplies power to at least one  
4 nonlinear load;

5 said device [comprises a plurality of said] includes a second and third electrical  
6 [circuits] circuit, each of said first, said second and said third electrical circuits being  
7 connected along a separate phase line [therein] in said electrical system [and] in series with  
8 at least one nonlinear load whose power is supplied by said separate phase line, [so as to]  
9 said first, said second and said third electrical circuits substantially eliminate a harmonic  
10 current in each of said separate phase lines drawn [thereby] by said nonlinear loads;

11 said second electrical circuit comprises a fourth passive electrical component, a fifth  
12 passive electrical component connected in parallel to said fourth passive electrical  
13 component, and a sixth passive electrical component connected in parallel to said fourth and  
14 said fifth passive electrical components;

15 said third electrical circuit comprises a seventh passive electrical component, an  
16 eighth passive electrical component connected in parallel to said seventh passive electrical  
17 component, and a ninth passive electrical component connected in parallel to said eighth and  
18 said seventh passive electrical components; and

19 wherein each of said first, said second and said third electrical circuits is tuned to a  
20 third harmonic of the AC source.

*SAC*

Please amend claim 11 as follows.

11. (amended) A device for reducing currents [substantially eliminating harmonic  
2 currents in an electrical system having] in an electrical system which supplies power to a  
3 nonlinear load [and] from an AC source[, and increasing the operational range of the  
4 nonlinear load], comprising:

5 a first passive electrical component connected in series with the nonlinear load;

6 a second passive electrical component connected in parallel to said first passive  
7 electrical component;

8 a third passive electrical component connected in parallel to said first and said second  
9 passive electrical component;

10 a housing member for said first, said second, and said third passive electrical  
11 components;

12 means for connecting the nonlinear load to said parallel connection of said first, said  
13 second and said third passive electrical components; and

14 wherein said first, said second, and said third passive electrical components are tuned  
15 to a third harmonic frequency of the AC source so as to substantially alter current drawn  
16 by the nonlinear load.

*C* Please amend claim 12 as follows.]

12. (amended) A device as recited in claim 11, [including] wherein:

2 [a housing for said first, said second, and said third passive electrical components;  
3 and]

4 said connecting means includes an equipment rack panel member connected to said  
5 *member* *member* housing so as to mount said housing in an equipment rack storing the nonlinear load; and

6 wherein said equipment rack panel member is substantially perforated so as to allow  
7 airflow to pass therethrough.

Please amend claim 13 as follows.

1        13. (amended) A device as recited in claim 11, [including] wherein:

2              [an electrical housing member;]

3              said connecting means includes at least one electrical socket for connecting to the  
4              nonlinear load, said socket being disposed along a first surface of said housing member[;],  
5              and at least one bracket member for mounting said device along a substantially planar  
6              surface so that said socket and said first surface of said housing member are substantially  
7              aligned with said planar surface, said device substantially replacing a conventional wall outlet.

*4/14/11  
new claim*

Pleas amend claim 15 as follows.

1        15. (amended) A device as recited in claim 11, further including:

2              an isolation transformer connected between said AC source and said parallel  
3              connection of said first, said second, and said third passive electrical components; and *4/14/11*  
4              [a housing member having] wherein said connecting means includes electrical  
5              [connectors] sockets extending therefrom for providing connection to the nonlinear load[;],  
6              and at least one bracket member for attaching said housing member to a utility cart.

Please delete claim 16 without prejudice and without dedication or abandonment of  
the subject matter thereof.

Please amend claim 17 as follows.

1        17. (amended) A device as recited in claim 11, including:

2              means, connected in series with said parallel [combination] connection of said first,  
3              said second, and said third passive electrical components, for [clamping] controlling current  
4              levels drawn by the nonlinear load, comprising a current [clamping] limiting circuit, a  
5              [sensor] circuit for detecting a rapid rise in current drawn by the nonlinear load and [means]  
6              a switch for automatically deactivating said clamping circuit based upon signal levels detected  
7              by said [sensor] current detecting circuit.

Please amend claim 18 as follows.

1           18. (amended) A device as recited in claim 17, wherein:  
2           said first, said second, and said third [devices] electrical components are tuned to a  
3           third harmonic frequency of the AC source.

Please amend claim 19 as follows.

1           19. (amended) A device as recited in claim 18, wherein:  
2           said current level [clamping] limiting circuit maintains a maximum current level drawn  
3           by the nonlinear load to between approximately 6 and 8 amps[; and  
4           the nonlinear load includes a heating unit].

Please add the following new claims 20-21.

-20-

A device as recited in claim 1, wherein:

1           each phase line in the electrical system supplies power to at least one nonlinear load;  
2           said device includes a second electrical circuit, each of said first and said second  
3           electrical circuits being connected along a separate phase line therein in said electrical  
4           system and in series with at least one nonlinear load whose power is supplied by said  
5           separate phase line, said first and said second electrical circuits substantially eliminate a  
6           harmonic current in each of said separate phase lines drawn by said nonlinear loads;  
7           said second electrical circuit comprises a fourth passive electrical component, a fifth  
8           passive electrical component connected in parallel to said fourth passive electrical  
9           component, and a sixth passive electrical component connected in parallel to said fourth and  
10          said fifth passive electrical components;  
11          wherein each of said first and said second electrical circuits is tuned to an identical  
12          harmonic frequency of the AC source.